

Nos. 18-1855, 18-1871

IN THE
United States Court of Appeals
for the
Sixth Circuit

Gary B., et al.,

Plaintiff-Appellants

— v. —

Richard R. Snyder, in his official capacity as
Governor of the State of Michigan, et al.,

Defendant-Appellees

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN, No. 2:16-CV-13292

**BRIEF OF ECONOMISTS AND PROFESSORS AS AMICI CURIAE
IN SUPPORT OF PLAINTIFF-APPELLANTS**

James E. Burke
Bryce J. Yoder
Amanda B. Stubblefield
KEATING MUETHING & KLEKAMP PLL
One East Fourth Street, Suite 1400
Cincinnati, OH 45202
(513) 579-6400

Counsel for Amici Curiae

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INTEREST OF AMICI CURIAE¹

Amici are economists and professors, whose expertise includes labor economics and the impacts of workers' skills and educational attainments on their economic and social wellbeing and on the broader communities in which they live. Collectively, amici share an interest in assisting the Court in understanding the economic and social consequences of denying children access to literacy. Because of their expertise, amici are uniquely positioned to explain the economic consequences—to both individuals and the State of Michigan—of denying Detroit's children access to literacy.

Lead author, Richard J. Murnane, an economist, is the Thompson Research Professor at the Harvard University Graduate School of Education, a Research Associate at the National Bureau of Economic Research, a member of the American Academy of Arts and Sciences, and a Fellow of the Society of Labor Economists. Murnane's expertise includes the labor-market effects and the social impacts of cognitive skills and educational attainments, as well as the ways in which technological changes and globalization have altered the foregoing. Murnane has authored six books, served as an editor for five others, and has published over 100 peer-reviewed research papers. Relevant publications include his and Frank Levy's 1996 book, *Teaching the New*

¹ Pursuant to Federal Rule of Appellate Procedure 29(a)(2) and (3), amici curiae have filed a Motion for Leave to File this brief. Pursuant to Rule 29(a)(4)(E), counsel for amici curiae state that no counsel for a party authored this brief in whole or in part and no person other than amici curiae or their counsel made a monetary contribution to its preparation or submission.

Basic Skills, and their 2004 book, *The New Division of Labor*. More recently, Murnane and fellow economist Greg Duncan led a large research project examining how the increase in family income inequality in the United States has affected educational opportunities for children growing up in low-income families. Murnane and Duncan edited the 2011 volume, *Whither Opportunity?* and co-authored the 2014 book, *Restoring Opportunity*.

David Autor, an economist, is the Ford Professor of Economics at the Massachusetts Institute of Technology, a Research Associate at the National Bureau of Economic Research, a member of the American Academy of Arts and Sciences, a Fellow of the Society of Labor Economists, and a Fellow of the Econometric Society. Autor's expertise includes human capital, skill demands, and earnings inequality, as well as labor-market and societal impacts of technological change and globalization.

David Deming, an economist, is a Professor at the Harvard Kennedy School and the Harvard Graduate School of Education, and a Research Associate at the National Bureau of Economic Research. Deming's expertise includes the economics of skill development, education, and the labor market.

David Figlio, an economist, is the Orrington Lunt Professor and Dean of the School of Education and Social Policy at Northwestern University. Figlio also serves as a Research Associate at the National Bureau of Economic Research, an Associate at the University of Wisconsin-Madison's Institute for Research on Poverty, and the Editor-in-Chief of the *Journal of Human Resources*. Figlio's expertise includes the

economics of education, teacher quality, teacher labor markets, anti-poverty policy, and intergenerational transmission of human capital.

Rucker Johnson, an economist, is an Associate Professor in the Goldman School of Public Policy at the University of California, Berkeley, and a Research Associate at the National Bureau of Economic Research. Johnson's expertise includes the economics of education, and specifically, the impact of poverty and inequality on an individual's life chances.

Jesse Rothstein, an economist, is a Professor in the Goldman School of Public Policy and the Department of Economics at the University of California, Berkeley; the Director of the Institute for Research on Labor and Employment at the University of California, Berkeley; and a Research Associate at the National Bureau of Economic Research. Rothstein previously served as the Senior Economist for Education and Labor at the Council of Economic Advisers, Executive Office of the President; and Chief Economist for the United States Department of Labor. Rothstein's expertise includes education and tax policy, and particularly the economics of education and its relation to children's academic and economic outcomes.

Thomas J. Kane, an economist, is the Walter H. Gale Professor of Education and Economics at the Harvard Graduate School of Education, the Faculty Director of Harvard University's Center for Education Policy Research, and a Research Associate at the National Bureau of Economic Research. Kane served as the Senior Economist for labor, education, and welfare issues on the Council of Economic Advisers during

President Clinton's administration. He has also held visiting fellowships at the Brookings Institution in Washington, D.C. and the Hoover Institution at Stanford University. Kane's expertise includes education policy and labor economics.

ARGUMENT

The first step on the path to economic and social inequality is the denial of the fundamental right of literacy. Once on that path, children fall irretrievably behind at the outset of their education, unable to comprehend school texts or understand the basic ideas in their core academic subjects. Put simply, denying children access to literacy blocks most roads to success, and far too often leads to a downward spiral from which these individuals are unlikely to recover. The consequences for those with deficient literacy skills are staggering: they face high dropout rates, extremely low lifetime earnings, and high probabilities of poverty, incarceration, and the need for public assistance. Importantly, these costs are not borne exclusively by the individuals denied the fundamental right of access to literacy. Rather, the State and society at large pay a high price as well, through, among other things, the loss of tax revenue, increased expenditures for government benefits and institutionalization costs, and economic stagnation.

The district court completely ignored these economic and social harms in concluding that access to literacy is not a fundamental right, and that Plaintiffs—children of color subjected to the atrocious conditions and inadequate instruction in Detroit’s schools—failed to demonstrate that they were denied equal protection under the law.² Yet, these harms are the very reasons that access to literacy must be recognized

² See Opinion & Order, R. 117, Page ID # 2819-2822.

as a fundamental right. Because educational opportunity is “the great equalizer of the conditions of men,”³ denying Plaintiffs the right of access to literacy denies them the opportunity for economic and social equality over the entirety of their lives.

I. Access to Literacy Provides Equality of Opportunity

“American society relies on its schools to level the playing field for children born into different circumstances.”⁴ “More than any other institution, schools are charged with making equality of opportunity a reality.”⁵

Plaintiffs’ schools are failing miserably in this mission, with devastating economic and social consequences to Detroit’s students. For children with deficient literacy skills, the odds of graduating high school are exceedingly low. And the consequences of dropping out of high school are extremely high: over the course of their working lives, Michigan’s high-school dropouts earn less than two-thirds as much as high-school graduates and less than one-third as much as holders of a Bachelor’s degree. Those burdens are not borne by students alone. For the State of Michigan, the average high-school dropout costs taxpayers approximately \$357,000. Both the individual economic impacts on children and the broader economic consequences for the State will be

³ In 1848, Horace Mann first proclaimed: “Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men—the balance-wheel of social machinery.” Horace Mann, *12th Annual Report to the Massachusetts State Board of Education, in Life & Works of Horace Mann*, Vol. 3, 669 (Mary Mann ed., 1868).

⁴ Greg J. Duncan & Richard J. Murnane, *The American Dream, Then & Now, in Whither Opportunity?: Rising Inequality, Schools, & Children’s Life Chances*, 7 (Duncan & Murnane ed., 2011).

⁵ *Id.*

discussed in turn.

II. Denying Children Access to Literacy Can Cause Devastating Economic Consequences for Those Individuals

A. Literacy development is crucial for both early educational and higher academic achievement.

As the State of Michigan has acknowledged, early intervention and adequate instruction—especially by third grade—are critical to literacy⁶ development.⁷ Even as early as the first grade, a child’s literacy skills can predict outcomes in “verbal ability and declarative knowledge in the [eleventh] grade.”⁸ “Students who do not read proficiently by fourth grade are not likely to catch up,” because “[i]n fourth grade, schools shift gears from teaching students how to read, to relying on students’ literacy to teach science, math, history,” and other subjects.⁹ As a result, “the reading proficiency gap remains as students advance through the educational system.”¹⁰

Indeed, “there is a strong connection between third-grade literacy and high-school graduation.”¹¹ “Students not proficient in reading at third grade are *four times*

⁶ “Literacy” encompasses not only phonetics and letter- and word-recognition abilities, but also the ability to compose, comprehend, and analyze written language. *See* Pls.’ Compl., R. 1, Page ID # 28-33.

⁷ *See* Third-Grade Reading Workgroup, *Third-Grade Reading Workgroup Report to Governor Rick Snyder*, (June 3, 2015), https://www.michigan.gov/documents/Snyder/3rd_Grade_Reading_Workgroup_Report_490977_7.pdf.

⁸ Anne E. Cunningham & Keith E. Stanovich, *Early Reading Acquisition & Its Relation to Reading Experience & Ability 10 Years Later*, *Developmental Psychol.*, Vol. 33, No. 6, 934, 940 (1997).

⁹ *Third-Grade Reading Workgroup Report*, *supra*, at 1-2.

¹⁰ *Id.*

¹¹ *Id.*

less likely to graduate from high school on time.”¹² For third-graders who have deficient literacy skills and also live in poverty, the combined effect “puts these children in double jeopardy,” with 26 percent failing to graduate from high school.¹³ For impoverished black children who are not reading proficiently in third grade, 31 percent fail to graduate from high school.¹⁴

B. Children who are denied access to literacy are also denied the opportunity to succeed economically.

1. Educational attainment is closely tied to economic opportunity.

Educational attainment—which is strongly predicted by early literacy skills—has a profound impact on an individual’s earning potential and the ability to secure a full-time job. “During the 1980s, education-related wage differentials grew substantially and have remained remarkably high,” relative to historical standards.¹⁵ Changes in the United States’ economy have exacerbated the negative economic effects of dropping

¹² *Id.* at 2 (emphasis added); see also Joy Lesnick, et al., *Reading on Grade Level in Third Grade: How Is It Related to High School Performance & College Enrollment?* (2010).

¹³ Donald J. Hernandez, *Double Jeopardy: How Third-Grade Reading Skills & Poverty Influence High School Graduation*, 7-8 (2012).

¹⁴ *Id.* at 9.

¹⁵ John J. Papay, Richard J. Murnane, & John B. Willett, *Income-Based Inequality in Educational Outcomes: Learning from State Longitudinal Data Systems*, Educ. Evaluation & Pol’y Analysis, Vol. 37, No. 1S, 29S, 30S (May 2015).

out of high school.¹⁶ Between 1969 and 2017, the percentage of jobs in manufacturing and administrative-support occupations—the two occupations that provided work for vast numbers of urban high-school graduates—fell from 55 to 22 percent.¹⁷ By contrast, “growth took place in higher paying occupational categories that typically require post-secondary education and in lower paying service[-]sector jobs such as food preparation and janitorial work.”¹⁸ Consequently, high-school graduates “who leave high school with the skills to succeed in post-secondary education and training find growing opportunities,” while high-school dropouts and high-school graduates with deficient literacy skills are increasingly relegated to low-paying jobs.¹⁹

A statistical comparison highlights the increasing payoffs for educational attainment: in 1979, four-year college graduates earned 46 percent more than high-school graduates on average. By 2012, college graduates earned 63 percent more than

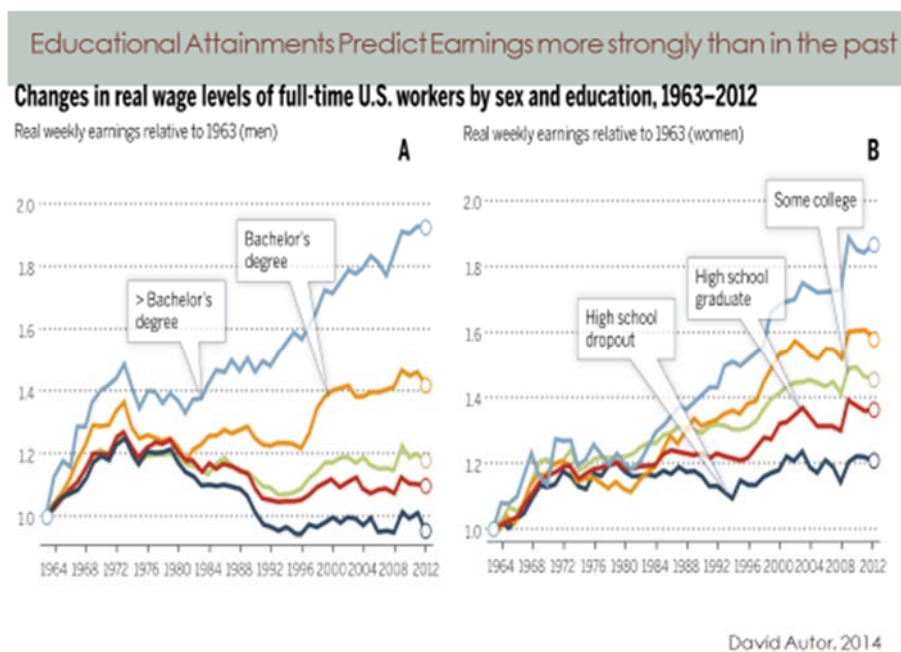
¹⁶ These economic changes, which increase the importance of cognitive skills like literacy, are particularly relevant when examining the “Motor City.” The automobile industry serves as an example of an industry transformed by technology. See Frank Levy & Richard J. Murnane, *Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy* (1996). Specifically, through the increased use of robots and other computer-driven machinery, vehicle manufacturers today need far fewer workers per 1,000 vehicles produced than they did 50 years ago. *Id.* Moreover, vehicle manufacturers now screen applicants for employment much more rigorously than in the past, requiring sufficient literacy skills, as well as teamwork skills. *Id.*

¹⁷ Frank Levy & Richard J. Murnane, *The New Division of Labor: How Computers Are Creating the Next Job Market*, 39-43 (2004); see also U.S. Dep’t of Labor, Bureau of Labor Statistics, *Occupational Employment Statistics* (May 2017), https://www.bls.gov/oes/current/oes_stru.htm.

¹⁸ Richard J. Murnane, *Educating Urban Children, in Making Cities Work: Prospects & Policies for Urban America*, 4 (Robert P. Inman ed., 2009).

¹⁹ *Id.*

the average high-school graduate, who in turn earned 38 percent more than the average high-school dropout.²⁰



Dropouts' labor-market problems are "particularly intense in states such as Michigan, which has faced severe labor[-]market difficulties in recent years."²¹ This is evinced by the decline in employment rates in Michigan between 1979 and 2006. For example, the "work rate" of male high-school dropouts fell by nearly 14 percent, compared to 11 percent for male high-school graduates, 3 percent for males with a Bachelor's degree, and 5 percent for males holding a Master's or higher degree.²²

²⁰ *Income-Based Inequality*, *supra*, 30S (citing David Autor, *Skills, Education, & the Rise of Earnings Inequality Among the "Other 99 Percent"*, *Science*, Vol. 344, Issue 6186, 843, 851 (May 23, 2014)).

²¹ Andrew Sum, et al., *An Assessment of the Labor Market, Income, Social, Health, Civic, Incarceration, and Fiscal Consequences of Dropping Out of High School: Findings for Michigan Adults in the 21st Century*, 4 (Jan. 2008), <http://www.gongwer.com/public/Mottreportentire.pdf>.

²² *Id.* at 32-33.

Not surprisingly, then, high-school dropouts face extreme economic difficulties in Michigan. To begin with, high-school dropouts are unlikely to be active participants in Michigan's labor force. "In 2006, slightly over three-fourths of Michigan adults (16-64 years old) were actively participating in the state's labor force"—that is, three-fourths of Michigan adults were either working or looking for work.²³ But "[o]nly 57 percent of Michigan adults lacking a high[-]school diploma/GED were either working or actively looking for work," versus "73 percent of high[-]school graduates, 84 percent of Bachelor's degree holders, and 87 of every 100 non-elderly adults with a Master's or higher degree."²⁴ Compared to their counterparts throughout the United States, adult male high-school dropouts in Michigan were "considerably less likely ... to be active participants in the labor force in 2006"—with labor-market-participation rates of 71 percent and 63 percent, respectively.²⁵

Unemployment rates further underscore high-school dropouts' dismal economic opportunities in Michigan. In 2006, unemployment rates ranged from a high of 22 percent among high-school dropouts and 11 percent among high-school graduates to lows of 4 percent among Bachelor's degree holders and only 2 percent among those holding a Master's or higher degree.²⁶ To add perspective to these percentages, Michigan's unemployment rate for "adult dropouts in 2006 was equivalent to

²³ *Id.* at 23.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 24.

Depression[-]era levels.”²⁷

Annual earnings, of course, follow labor-market participation and employment rates, all of which are heavily influenced by educational attainment. During 2005-2006, “[m]ean annual earnings of Michigan adults lacking a regular high[-]school diploma or a GED were slightly under \$13,400,” compared to \$21,880 for high-school graduates, \$30,658 for those with 1-3 years of college, more than \$48,200 for Bachelor’s degree holders, and topping out at \$72,841 for those with a Master’s or higher degree.²⁸

The earning differentials between dropouts and their more educated peers are all the more glaring when stretched out over their working lives. For Michigan adults lacking a high-school diploma/GED, their mean lifetime earnings totaled only \$614,000, compared to \$966,000 for high-school graduates, \$1.953 million for Bachelor’s degree earners, and \$2.768 million for those holding a Master’s or higher degree (all earnings figures expressed in constant 2006 dollars to remove the effects of inflation).²⁹ Those mean lifetime earnings marked a significant decline for Michiganders. Since 1979, real (that is, net of inflation) mean lifetime earnings of Michigan adults have declined for all educational groups, except holders of a Master’s or higher degree.³⁰ Adult males without a high-school diploma or GED have suffered the steepest decline, with their mean real lifetime earnings decreasing by 47.4 percent

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.* at 42.

³⁰ *Id.* at 43.

from 1979 to 2006.³¹ In 2006, the estimated gap “between the mean lifetime earnings of high[-]school graduates and dropouts was a fairly substantial \$351,000” or 57 percent.³² Consequently, between 1979 and 2006, the poverty rate for Michigan’s high-school dropouts nearly doubled—raising from 14.6 percent to 26.7 percent.³³ In short, when it comes to educational attainment, every little bit helps, making access to literacy all the more fundamental.

Beyond these economic effects, high-school dropouts suffer additional social costs, including, but not limited to, staggering incarceration rates, high rates of public assistance and family instability, high health risks and low rates of health-insurance coverage, low civic participation rates, and the silencing of their political voice.³⁴

2. The economic realities in Detroit are especially dire.

Children growing up in low-income families in Wayne County—where Detroit is located—are among the least likely children in the country to escape poverty as adults.³⁵ In Detroit, the economic consequences of dropping out of high school are realized almost immediately, as revealed by comparing the employment rates for teen

³¹ *Id.*

³² *Id.* at 44.

³³ *Id.* at 52.

³⁴ *See infra* pp. 15-20.

³⁵ *See* Raj Chetty & Nathaniel Hendren, *The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects*, *The Q. J. of Econ.*, Vol. 133, Issue 3, 1107-62 (2018); *see also* Raj Chetty & Nathaniel Hendren, *The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates*, *The Q. J. of Econ.*, Vol. 133, Issue 3, 1163-1228 (2018).

high-school graduates and teen high-school dropouts. During 2005 and 2006, only 18 percent of teenage dropouts in Detroit were employed—a percentage “that was less than half as high as that prevailing among their national counterparts during the same period.”³⁶ Stated differently, “82 out of every 100 teenaged dropouts” in Detroit were jobless.³⁷ Teenagers with a high-school diploma had a slightly higher employment rate of 35 percent, though still “well below” Michigan’s statewide average for teen high-school graduates of 46 percent.³⁸

3. For black high-school dropouts, economic opportunities are particularly bleak.

Black high-school dropouts suffer the highest unemployment rates, making educational attainment even more important for their economic opportunities.³⁹ As of January 2018, only 25.3 percent of black adults lacking a high-school diploma/GED were employed, compared to 31 percent of white high-school dropouts and 48.3 percent of Hispanic dropouts.⁴⁰ With increased educational attainment, however, employment rates for black adults are much closer to—and even occasionally surpass—

³⁶ *An Assessment of the Labor Market, supra*, 37.

³⁷ *Id.*

³⁸ *Id.* at 36.

³⁹ See Economic Policy Institute, *State of Working America Data Library*, Employment to Population Ratios (Jan. 2018), https://www.epi.org/data/#/?subject=epop&re=*e=* (last visited Nov. 5, 2018); see also Andrew Sum, et al., *The Consequences of Dropping Out of High School: Joblessness & Jailing for High School Dropouts & the High Cost for Taxpayers*, 3 (Oct. 2009), <https://repository.library.northeastern.edu/files/neu:376322> (noting that in 2008 black dropouts were the least likely to be employed, translating into a jobless rate for blacks” of 69 percent).

⁴⁰ *Id.*

those of their white and Hispanic counterparts:

January 2018 Employment-to-Population Ratio				
	White	Hispanic	Black	Average
Less than High School	31.0%	48.3%	25.3%	36.6%
High School	53.3%	65.5%	54.6%	55.8%
Some College	61.3%	69.1%	63.9%	62.7%
Bachelor's Degree	71.6%	75.5%	74.2%	71.8%
Advanced Degree	71.6%	79.9%	76.2%	73.2%
Total Employment Rate	59.9%	62.7%	57.3%	60.1%

The pattern in earnings tells a similar story. Nationally, black adults between the ages of 18 and 64 earned less per hour, at every educational level, than their white and Hispanic counterparts. In 2017, black high-school dropouts earned a median hourly wage of \$12.23, which translates to full-time, full-year earnings of \$21,403, an amount approximately equal to the poverty line for a family of two in that year. But black four-year college graduates earned a median hourly wage of \$26.53, more than twice that earned by black high-school dropouts.⁴¹

2017 Wages By Education and Race				
	White	Hispanic	Black	Average
Less than High School	\$14.64	\$13.85	\$12.23	\$13.90
High School	\$19.12	\$16.67	\$14.93	\$17.85
Some College	\$20.60	\$18.08	\$16.59	\$19.47
Bachelor's Degree	\$33.70	\$27.69	\$26.53	\$32.49
Advanced Degree	\$41.90	\$36.60	\$33.92	\$41.36

4. The economic consequences of denying individuals access to literacy haunt even those who graduate high school.

Although increased educational attainment improves an individual's economic

⁴¹ See Economic Policy Institute, *State of Working America Data Library*, Wages by Education (2017), <https://www.epi.org/data/#/?subject=wage-education> (last visited Nov. 5, 2018).

chances, high-school diplomas alone cannot shield individuals from the economic consequences of deficient literacy skills. Even if an individual is somehow able to graduate from high school or college, despite their literacy deficiencies and the horde of obstacles standing in their way, poor literacy skills continue to negatively impact labor-market success and earning potential.⁴² Indeed, the “earnings of prime-age, full-time workers *at every level of education* increase[] with higher levels of literacy and numeracy proficiencies.”⁴³ And even modest disparities in literacy skills are reflected in earnings differentials. For example, the earnings of workers with level 3 literacy/numeracy skills are one-third higher than those of their counterparts at level 2.⁴⁴ Workers with the strongest basic skills—those that have literacy/numeracy skills at levels 4 and 5—earn approximately 75 percent more than their level 2 counterparts.⁴⁵

* * *

The cost of denying individuals the fundamental right of access to literacy is astronomical. For high-school dropouts, their future forecast is especially poor. But even for those who are able to earn a high-school diploma, deficient literacy skills continue to hinder economic success and limit earning potential.

⁴² See Glenda Quintini, *Skills at Work: How Skills & their Use Matter in the Labour Market*, OECD Social, Emp’t & Migration Working Papers, No. 158, 11 (2014).

⁴³ Neeta Fogg, et al., *Skills & Earnings in the Full-Time Labor Market*, 54 (2018), <https://www.ets.org/s/research/pdf/skills-and-earnings-in-the-full-time-labor-market.pdf>.

⁴⁴ *Id.* at 6.

⁴⁵ *Id.*

III. States That Deny Children Access to Literacy Also Suffer Severe Economic Consequences

The benefits of additional educational attainment “accrue to society as a whole as well as to the individuals themselves.”⁴⁶ Likewise, the costs of denying individuals the fundamental right of access to literacy are incurred by the public at large, as well as the states that serve them.

A. When children are denied the fundamental right of access to literacy, economic growth stalls, tax revenues decline, and expenditures increase.

The rate of economic growth in a particular state depends on the quality of its labor force, as measured by standardized assessments of cognitive skills—like literacy—of each state’s working-age population.⁴⁷ The same is true for cities.⁴⁸ Therefore, denying Plaintiffs the fundamental right of access to literacy and equal protection under the law “jeopardizes future economic growth” in Detroit and in Michigan.⁴⁹

At the same time, states that deny individuals the fundamental right of access to literacy suffer a multitude of more immediate economic consequences. As demonstrated above, individuals with low literacy skills—especially those that are unable to graduate from high school—are unlikely to actively participate in the labor

⁴⁶ *An Assessment of the Labor Market, supra*, 106.

⁴⁷ Eric A. Hanushek, et al., *Knowledge Capital & Aggregate Income Differences: Development Accounting for U.S. States*, Am. Econ. J.: Macroeconomics, Vol. 9, No. 4, 184, 186 (Oct. 2017).

⁴⁸ Edward Glaeser, et al., *Economic Growth in a Cross-Section of Cities*, J. of Monetary Econ., Vol. 1, Issue 1, 117, 131-35 (Aug. 1995).

⁴⁹ *Income-Based Inequality, supra*, 29S.

market, experience higher rates of unemployment, and earn relatively little even when able to secure employment. These individual economic consequences translate into decreased tax revenues for federal, state, and local governments.

During 2004 and 2005, “only 45 percent of adults lacking a high[-]school diploma/GED paid any federal income tax,” compared to 59 percent of high-school graduates, 77 percent of adults with a Bachelor’s degree and “slightly more than 82 percent of those with a Master’s or higher degree.”⁵⁰ As for state income taxes, the proportions were roughly the same. Only 54 percent of Michiganders lacking a high-school diploma/GED paid state income tax, whereas 68 percent of high-school graduates paid state income tax.⁵¹

In addition to contributing little to tax revenues, Michigan adults without a high-school diploma/GED exact an enormous economic drain on government entities through their dependence on government benefits. Unsurprisingly, “[t]he least educated adults (those without high[-]school diplomas) were much more likely than their better educated peers to rely on cash and non-cash transfer incomes from federal, state, and local governments” to support themselves and their families.⁵² Between 2005 and 2006, “approximately 17 of every 100 adults lacking a high[-]school diploma or

⁵⁰ *An Assessment of the Labor Market, supra*, 112.

⁵¹ *Id.* at 112-13.

⁵² *Id.* at 119-20.

GED certificate were recipients of some type of cash public assistance income⁵³ versus 12 percent of high[-]school graduates” and “only 4 percent of adults with a Bachelor’s or higher degree.”⁵⁴ Likewise, “[m]ore than one-third of Michigan households headed by a person without a high[-]school diploma/GED received food stamp benefits during 2006.”⁵⁵ Nationally, only one-quarter of similar households received food stamps.⁵⁶

The financial burden intensifies when broader categories of government cash transfers⁵⁷ and in-kind benefits⁵⁸ are taken into consideration. During 2004 and 2005, the mean values of both cash and in-kind transfers received by Michigan adults lacking a high-school diploma/GED totaled \$8,582.⁵⁹ But for high-school graduates, the mean value of these annual transfers totaled only \$4,000, and for Michigan adults holding a Bachelor’s degree, only \$1,300.⁶⁰

States that deny access to literacy, and thereby reduce individuals’ educational attainments, also incur additional expenses in the form of institutionalization costs. On

⁵³ *Id.* at 103 (“Public assistance income” includes Supplemental Security Income for the Disabled, Temporary Assistance for Needy Families benefits, and Social Security disability and retirement income).

⁵⁴ *Id.* at 103.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.* at 107 (“Government cash transfers” include unemployment benefits, worker’s compensation, Social Security payments, Supplemental Security Income, Temporary Assistance for Needy Families benefits, veteran’s payments, survivor’s income benefits, other disability income, and federal earned-income tax credits).

⁵⁸ *Id.* at 107 (“In-kind benefits” include food stamps, Medicare insurance, Medicaid benefits, housing subsidies, school-lunch subsidies, and energy-assistance payments).

⁵⁹ *Id.* at 121.

⁶⁰ *Id.*

any given day between 2006 and 2007, nearly 1 out of every 10 male high-school dropouts was incarcerated or otherwise institutionalized. The institutionalization rates were significantly lower for males with greater educational attainments—only 1 of every 33 high-school graduates, and only 1 of every 500 men holding a Bachelor’s or higher degree.⁶¹ Moreover, recent research demonstrates that the impact of education on incarceration rates is causal; increasing high-school graduation rates reduces the probability that males will be incarcerated.⁶²

In Michigan specifically, “[y]ounger high[-]school dropouts were twice as likely to be incarcerated as high[-]school graduates and nearly 50 times more likely to be incarcerated as their peers with a Bachelor’s degree” in 2006.⁶³ “Within each race-ethnic group, the institutionalization rates of male dropouts were higher than” their better educated peers.⁶⁴ But the disparities between black, white, and Hispanic male dropouts “were particularly large.”⁶⁵ During 2006, nearly 18 percent of black dropouts between the ages of 18 and 34 years old were institutionalized versus 3.4 percent of white male dropouts and 2.7 percent of Hispanic male dropouts.⁶⁶ Given the staggering incarceration rates for high-school dropouts and the enormous expense of operating

⁶¹ *Id.* at 95.

⁶² See Lance Lochner & Enrico Moretti, *The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, & Self-Reports*, Am. Econ. Review, Vol. 94, No. 1, 155, 189 (Mar. 2004).

⁶³ *An Assessment of the Labor Market, supra*, 97.

⁶⁴ *Id.* at 98.

⁶⁵ *Id.*

⁶⁶ *Id.*

correctional facilities,⁶⁷ the cost of institutionalizing high-school dropouts places a substantial burden on Michigan, as well as its taxpayers.⁶⁸

B. High-school dropouts impose a net fiscal burden on the State of Michigan.

To comprehend the full extent of the costs of denying individuals the fundamental right of access to literacy, the “mean annual net fiscal contribution to federal, state, and local governments” can be calculated by combining the “mean annual tax payments” of Michigan adults and the “mean annual values of their cash and in-kind transfers and their institutionalization costs.”⁶⁹ Taken together, Michigan adults lacking a high-school diploma/GED impose a *net fiscal burden* on—rather than a contribution to—the State of Michigan. For example, over the 2004-2005 period, Michigan adults without a high-school diploma/GED had a *negative* mean net fiscal contribution totaling -\$3,269.⁷⁰ Michigan adults with higher educational attainments all contributed a *positive* net fiscal contribution to the State, ranging from a contribution of \$4,201 for high-school graduates to \$17,698 for four-year college graduates, and \$27,636 for holders of a Master’s or higher degree.⁷¹

⁶⁷ According to the Michigan Department of Corrections, the average annual cost per prisoner in 2011 ranged from \$23,795 to \$40,003, for an average annual cost of \$34,183. Mich. Dep’t of Corr., *Annual Report*, 5 (2011), https://www.michigan.gov/documents/corrections/2011_Annual_Report_425826_7.pdf.

⁶⁸ *An Assessment of the Labor Market, supra*, 99.

⁶⁹ *Id.* at 122.

⁷⁰ *Id.* at 123.

⁷¹ *Id.*

Of course, the expense of denying individuals the fundamental right of access to literacy is amplified over the course of the individual's working life. Based on data spanning from approximately 1956 to 2005, "the average high[-]school dropout in Michigan would produce a substantial net fiscal *burden* of \$160,000, while the average high[-]school graduate would *generate* \$197,000 more in taxes than he/she would impose in transfer costs and institutionalization costs."⁷² Thus, each high-school diploma earned adds a value of approximately \$357,000 to federal, state, and local tax coffers.⁷³ Put another way, over their working lives, the average high-school dropout will cost Michigan taxpayers approximately \$357,000,⁷⁴ relative to an average high-school graduate.⁷⁵ Therefore, affording the fundamental right of access to literacy to Plaintiffs would pay dividends to Michigan and to society at large.

CONCLUSION

The Constitution provides for equality of opportunity. Education—and more specifically, literacy—is the lifeline that makes equality of opportunity possible.

⁷² *Id.* at 126 (emphasis added).

⁷³ *Id.* at 127.

⁷⁴ It is worth noting that the Third-Grade Reading Workgroup Report, prepared for Governor Snyder, quotes Andrew Sum's research when indicating that "[e]ach high[-]school dropout costs [Michigan] more than \$292,000 in lost revenue and higher social costs." *Third-Grade Reading Workgroup Report, supra*, at 2 (citing *The Consequences of Dropping Out, supra*, at 15). But Sum's 2008 Report, which specifically assessed the fiscal consequences of high-school dropouts in Michigan, found that high-school dropouts cost Michigan \$65,000 more than the national average. *An Assessment of the Labor Market, supra*, 126-27.

⁷⁵ *Id.*

Without access to literacy and educational attainment, equality of opportunity cannot exist.

With due regard for the economic and social consequences discussed herein, the Court should conclude that access to literacy is a fundamental right. And as the disparate economic outcomes thrust upon children denied access to literacy demonstrate, the State of Michigan has denied Plaintiffs equal protection under the law. As long as Michigan denies Plaintiffs the fundamental right of access to literacy, everyone—individual taxpayers, the State of Michigan, and society alike—will continue to pay the heavy price. For all these reasons, the United States Constitution guarantees access to literacy as a fundamental right.

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Respectfully submitted,

/s/ James E. Burke

James E. Burke

Bryce J. Yoder

Amanda B. Stubblefield

KEATING MUETHING & KLEKAMP PLL

One East Fourth Street, Suite 1400

Cincinnati, OH 45202

(513) 579-6400

jburke@kmklaw.com

byoder@kmklaw.com

astubblefield@kmklaw.com

Counsel for Amici Curiae

CERTIFICATE OF COMPLIANCE

In accordance with Rules 29(a)(4)(G), 32(a)(7)(C), and 32(g) of the Federal Rules of Appellate Procedure, the undersigned counsel certifies that this brief:

(i) complies with the type-volume limitation of Rule 29(a)(5) because it contains 6,294 words, including footnotes and excluding the parts of the brief exempted by Rule 32(a)(7)(B)(iii); and

(ii) complies with the typeface requirements of Rule 32(a)(5) and the type-style requirements of Rule 32(a)(6) because it has been prepared using Microsoft Word 2010 and is set in Garamond 14-point font.

/s/ James E. Burke _____

James E. Burke
KEATING MUETHING & KLEKAMP PLL
One East Fourth Street, Suite 1400
Cincinnati, OH 45202
(513) 579-6400
jburke@kmklaw.com

CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of November, 2018, I served the foregoing brief on counsel for the parties via the Court's ECF system:

/s/ James E. Burke _____

James E. Burke

KEATING MUETHING & KLEKAMP PLL

One East Fourth Street, Suite 1400

Cincinnati, OH 45202

(513) 579-6400

jburke@kmklaw.com

8799697.4